

Asymptotic Solutions for the Equations of Uniform
Non-Equilibrium Motion of an Ideal Gas and the
Asymptotic Decay of Shock Waves, by Yu. L. Yakimov.

RUSSIAN, per, Prikl Mat i Mekh, Vol XIX, 1955,
pp 681-692.

Sci-Phys

Dec 59

CCT-876B

CCT-876 TM

103180

The Conditions for the Appearance of Convection
in a Binary Mixture, by B. A. Vestgaia, 9 pp.

RUSSIAN, per, Prilozheniya Matematika i
Mekhanika, Vol 19, No 6, 1955, pp 745-750.

1911248567
AEC DE Tr-59

331,085

Sci - Materials
Aug 67

Calculation of the Flow Over a Rotating Circular
Lattice, by L. A. Dorfman, 7 pp.

RUSSIAN, per, Pril Matemat i Mekh, Vol XII, 1956,
pp 121-125. 9210853

A.C.S.I.L. Tr 1330

Sci - Math & Data Process
Sep 63

344,183

Theory of the Motion of a Body With Cavities
Partly Filled With a Liquid, by D. E. Okhotsim-
skiy, 21 pp.

RUSSIAN, per, Prikl Matemat i Mekh, Vol XX,
No 1, Jan/Feb 1956, pp 3-20.

NASA TR F-33

NLL 11/1/60

Sci. - Fuels

May 60

116,066

The Motion of a Rigid Body With a Cavity Filled
Filled With Liquid, by G. S. Narimanov, 39 pp.

RUSSIAN, per, Prikl Matemat i Mekh, Vol XX, No 1,
1956, pp 21-38.

SLA 60-17360

Sci

OIS, Vol IV, No 3

Oct 60

129, 436

Impact on a Compressible Fluid, by I. T. Egorov,
12 pp.

RUSSIAN, per, Prikl Matemat i Mekh, Vol XX, No 1,
1956, pp 67-72.

NACA TM 1413

Sci - Phys

Apr 58

61,491

Sokolovskii, V. V.
THE FORMS OF STABLE SEMI-ARCHES AND
ARCHES (O Formakh Ustolchivlykh Polusvodov i
Svodov). Jan 60 [16]p. 5 refs. TIL/T. 4880; [DSIR LLU]
M. 2694; AD-245 810.
Order from OTS or SLA \$1.60

61-27046

Trans. of Prikl[adnaya] Mat[ematika i] Mekh[anika]
(USSR) 1956, v. 20, no. 1, p. 73-86.

DESCRIPTORS: *Continuous media, Elasticity, Plasticity, Rupture, Internal friction.

An investigation is made of the two-dimensional limiting equilibrium of a connected medium with free contours, this being accompanied by rupture curves. Consideration is devoted to the limiting equilibrium of semi-arches and arches resulting from their own weight and an example is given of the determination of rupture (Mechanics--Statics, TT, v. 6, no. 10) (over)

61-27046

1. Title: Arches
2. Title: Semi-arches
1. Sokolovskii, V. V.
- II. TIL/T. 4880
- III. Ministry of Aviation
(Gt. Brit.)
- IV. DSIR LLU M. 2694
- V. AD-245 810

Office of Technical Services

On the Theory of Stream Flow Around Bodies of Low Aspect Ratio, by M. N. Kogan,

RUSSIAN, per, Prikl Matemat i Mekh., Vol ~~XX~~ XX, No 1,
1956, pp 87-94.

*Rand Corp

Sci - Physics
Jan 59

as per telephone conversation with Mrs Wisniewski

Loytsyanskly, L. G.
ON THE THEORY OF SPHERICAL BEARING. [1961]
[3]p. (foreign text included) 2 refs. [DSIR LLU]
M. 2605.
Order from OTS or SLA \$1.10

61-23273

Trans. of Prikl[adnaya] Mat[ematika i] Mekh[anika]
(USSR) 1956 [v. 20] no. 1, p. 133-138.

DESCRIPTORS: *Fluid flow. Analysis. Spheres. Theory

An analysis is presented of the motion of an incompressible fluid located between a stationary outer sphere and a moving inner sphere of approximately the same diameter. The integral found by G. H. Wannier (Quart. Applied Math. 8: 1-32, 1950) is used: the Reynolds equation corresponds to the case of rotation of the inner sphere around the axis perpendicular to the line joining sphere centers. The formulae of the main vector and of the main moment of the fluid reaction (Mechanics--Hydrodynamics, TT, v. 6, no. 3) (over)

61-23273

L. Loytsyanskly, L. G.
IL DSIR LLU M. 2605

17536.

Office of Technical Services

**Subsonic Flow Past a Profile in the Presence
of a Supersonic Region, which Terminates in a
Straight Compression Shock, by F. I. Frankl, 12 pp.
CONFIDENTIAL**

**RUSSIAN, no per, Prik Matemat i Mekh Mekh, Vol XX,
No 2, Mar/Apr 1956, Encl to IR-1324-56, ATI
Bukharin Directorate.**

*HIB/514-21654
AF 1042683*

**Sci - Physics, aerodynamics
Jan 57 CTS**

442, 881

The Periodic Solutions of Differential Equations, by N. P. Krugin. UECL

RUSSIAN, per, Fizik Mat. i Mekh, Vol XX, 1956, pp 148-152.

RAE 83 865

JIB/SI.4 T 2172

Sci - Math

Jun 60

117,594

On Vibrations of a Plate Moving in A Gas,
by A. A. Morchan, 19 pp.

RUSSIAN, per, Brik Matemat i Mekh, Vol XX,
No 2, 1956, pp 211-222.

NASA RE 11-22-58W

Sci - Phys

Mar 59

82, 502

A problem of heat conduction for two media,
by D. Shil'krut, 11 pp.

RUSSIAN, per, Priklad Mat i Mekh, 20, no 2,
p 284-88, 1956.

SIA R-3623

Sci

Aug 59

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Concerning the Application of A. M. Lyapunov's
Method for Equations with the Lags, by N. N.
Krasovskiy.

RUSSIAN, per, Prikl Matemat i Mekh, Vol XX, 1956,
pp 325-327.

INSDOC-T1909

Sci

Aug 58

7-2, 7/8

Three-Dimensional Streamline Flow Around Slender
Bodies, by H. D. Khachat, 27/ 12 pp.

RUSSIAN, par, Prikl Mat i Mekh, Vol IX, No 5, 1966,
pp 228-230

Sci

Aug 58

27-1165
Mach. L.
S. Khachat

27, 1966

On the Motion of a Liquid in an Oscillating Container,
by V. V. Bolotin, 6 pp.
RUSSIAN, per, Prik Matemat i Mekh, Vol XX, 1956,
pp 293-294. 9691839
DDC RSIC-133

Sci - Phys
Mar 64

252,974

On the Drag Due to Generation of Lift in a
Supersonic Flow, by G. I. Taganov, 18 pp. CONFIDENTIAL

RUSSIAN, bimo per, Prik Mat i Mekh, Vol XX, ^{No 3,} 1956,
pp 382-394, Encl to IR 1665-56, USAF, ATI
Directorate.

AF 1054597

Sci - Aeronautics, research
Feb 1957 CTS/dcx

43464

Laminar Boundary Layer of a Compressed Gas on a
Plate in the Case of Considerable Temperature
Jumps, by V. V. Lunov. UNCLASSIFIED

RUSSIAN, par, Fizik Mat i Mekh, Vol XI, No 3,
1956, pp 395-401. CIA 9031276

TYL 4912

Sci - Phys
Dec 58

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About the Corresponding Equilibrium of a Physical
Pendulum With Movable Support Point, by A. Yu.
Ishlinsky, 20 pp.

RUSSIAN, per, Prikladnaya Matematika i Mekhanika,
Vol. XXI, No. 3, 1956, pp 307-308.

ATIC P-TS-9336/V

Sci - Engineering
Jun 58

65, 617

Approximate Solution of Some Nonstationary Boundary Layer Problems, by E. M. Dobryshman.
RUSSIAN, per, Prikladnaya Matematika i Mekhanika
Vol 20, 1956, pp 402-410. P911129166
AEC ANL-tr-368

Sci/Sci/Physics
Dec 66

314,585

Relation Between Stresses and Deformation
in the Non-Linear Theory of ~~XXX~~ Elasticity
by L. A. Tolokonnikov, 6 pp.

RUSSIAN, per, Prikl. Matem. i Mekh, Vol XX,
No 3, 1956, pp 438-444.

CSIRO

Sci. Phys
Nov 61

174,399

Some Direct Methods in the Nonlinear
Theory of Shallow Shells, by I. I. Vorovich,
57 pp.
RUSSIAN, per, Prikl Mat i Mekh, Vol XX,
1956, pp 449-474. P100066866
FTD-TT-65-1744

Sci - Math Sci
Oct 66

312,604

Barenblatt, G. I.
ON CERTAIN PROBLEMS OF THE THEORY OF
ELASTICITY THAT ARISE IN THE INVESTIGA-
TION OF THE MECHANISM OF HYDRAULIC RUP-
TURE OF AN OIL-BEARING LAYER (O Nekotorykh
Zadachakh Teorii Uprugosti, Voznikayushchikh pri
issledovanii Mekhanizma Gidravlicheskogo Razryva
Neftenosnogo Plasta). [1962] [27]p. (foreign text
included) 12 refs.

Order from OTS or SLA \$2.60

62-14583

Trans. of Prikladnaya Matematika i Mekhanika
(USSR) 1956, v. 20 [no. 4] p. 475-486.

DESCRIPTORS: *Elasticity, Theory, Petroleum,
Sources, Rock, Fracture (Mechanics).

A clarification is presented of the hypothesis of
S. A. Christianovich (Akad. Nauk SSSR Otdel. Tekh.
Nauk Izvestia 1955: no. 5 and 1955: no. 11) from
(Mechanics, TT, v. 8, no. 9) (over)

62-14583

1. Title: Hydraulic fracturing
1. Barenblatt, G. I.

Office of Technical Services

On the Theory of Gyro-horizon Compass, by A. Yu. Ishlinskiy, 25 pp. UNCLASSIFIED

RUSSIAN, per, Prik Matemat i Mekh, Vol XX, No 4, 1956, pp 487-499.

ATIC F-TS-9335/V

Sci - Engineering

Feb 58

58,723

On ~~the~~ ^{the} Asymptotical Stability of Systems with
Aftereffect, by N. N. Krasovskiy, 14 pp.

RUSSIAN, per, Prikl Matemat i Mekh, Vol XI, 1956, pp
513-518.

SLA R-2331

Sci

Aug 58

71,997

Some Properties of Three-Dimensional Supersonic
Flow, by M. N. Kogan, ~~by~~ 4 pp.

RUSSIAN, per, ~~Prik Mat. i Mekh.~~, Vol XX, No 5,
Sep/Oct 1956, Encl to IR 520-57, USAFE, ATI Dir.

AF 1093644

Sci - Aeronautics
Jun 57

48, 235

Problems in the General Theory of Elastic
Stability, by V. V. Bolotin,
RUSSIAN, per, Prikladnaya Mat. I. Mekh.,
Vol XX, No 3, 1956, pp 561-577.
ALL KES 3560
(On Loan or Purchase)

Sci-Mech
Apr 67

524,024

A Shock Wave at a Considerable Distance From the
Point of Explosion, by S. A. Khristianovich.

RUSSIAN, per, Prik Mat i Mekh, Vol XX, No 5, 1955,
pp 599-605.

D.S.I. Tr 277

Sci - Physics

48,570

Jun 57

On the Problem of a Laminar Boundary Layer Near a
Porous Wall, by L. S. Gandin, and R. E. Solov'ichik,
4 pp.

RUSSIAN, per, Prikladnaya Matematika, Vol XX, No 5,
1956, p 663-667.

Morris D. Friedman
G - 138 62.00

*Sci
Jul 57*

68,735

**Influence of Internal Pressure on the Critical Shear
Stress for an Infinitely Long Cylindrical Shell,
by L. A. Shapalov.
RUSSIAN, Per, Prik Matemat i Mekh, Vol XX, No 5,
1956, pp 669-671.
NASA TT F-8470**

**Sci - Phys-
Mar 64
U. S. GOVERNMENT ONLY**

251,958

On the Theory of Stability of Control Systems,
by V. V. Rumyantsev.
RUSSIAN, per, Frik Mat i Mekh, Vol 20, 1956,
pp 714-722.
NLL Ref: 5207 (1210)

Sol-Trop and Fuels
Aug 68

363,633

On Self-Similar Solutions of the Cauchy Problem for
the Non-Linear Parabolic Equation of the Nonsteady
Filtration of a Gas in a Porous Medium, by G. I.
Barenblatt.

RUSSIAN, per, Prikl Mat i Mekh, Vol XX, No 6, 1956,
pp 761-763.

Morris D. Friedman Tr B-132

May 58

63,224

Table of Contents of:

Prik Matemat i Mekh, Vol XXI, No 1, 1957, pp 3-153.

FDD X 2624

On the Theory of the Gyroscopic Pendulum, by
A. Yu. Ishlinskiy, 28 pp.

RUSSIAN, per, Prikl Matemat i Mekh , Vol XXI, 1957,
pp 3-14.

ATIC F-TS-9289/V

Sci - Phys

Jan 58

57, 875

1

175 62-4277

The Flow of a Heavy Liquid Over an Undulating
Surface, by H. N. Moiseyev,
RUSSIAN, per. Prik. Mat. i Mekh., Vol 21, 1957,
pp 15-20,
NLL Ref: 5828.4F (7807)

Sci/Physics
Mar 70

404,086

Shock Wave Damping, by M. D. Ladyzhenskiy.

RUSSIAN, per, Prikl Matemat i Mekh, Moscow,
Vol XXI, No 1, 1957, pp 27-34.

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Various Abstracts of Articles, 11 pp.

RUSSIAN, no per, Prikl Matemat i Mekh, Vol I,
1957, pp 3-152, Encl to IR 975-57, UBAFE, ATI
Directorate.

AF 1120363

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Sci - Mathematics; Eng
Aug 57

51, 893

Asymptotic Integration of Equations of the Static
Stability of a Conical Shell of Rotation, by N. A.
Alamyayev.

RUSSIAN, par, Prikl Matemat i Mekhanika, 1957,
Vol XXI, No 1, pp 83-89.

Co-op Tr Scheme 585

~~USSR~~

Sci - Math, Physics

Mar 59

82,487

Approximate Integration of Equations of a Plane Problem
of the Theory of Plasticity, by S. M. Belonosov.
UNCLASSIFIED

RUSSIAN, per, ^{encl} Prik Mat i Mekh, Vol XXI, No 1, 1957,
pp 109-115.

*DSIR/TCL 101

Sci - Math
Oct 58

Razumikhin, B. S.
ESTIMATES ON SOLUTIONS OF SYSTEMS OF DIFFERENTIAL EQUATIONS WHICH ARE EQUATIONS OF DISTURBED MOTION WITH VARIABLE COEFFICIENTS. [1961] [7]p. 2 refs.
Order from UTS or SLA \$1.10 61-16124

Trans. of Prikladnaya Matematika i Mekhanika (USSR)
1957, v. 21, no. 1, p. 119-120.

DESCRIPTORS: *Differential equations, Numerical analysis. *Motion, Stability, Equations.

(Mechanics, TT, v. 6, no. 2)

61-16124

I. Razumikhin, B. S.

10769

Office of Technical Services

11 585

GE-1

GERMAIDZE E. V.

On asymptotic stability in the first approximation

Ueber die asymptotische Stabilität nach erster Näherung

Prikl. Mat. i Mekh., 21, 133-136 (1957) - German

E u r a t o m

On the Theory of Conical Flows, by B. M. Bulakh.
UNCLASSIFIED

RUSSIAN, per, Prik Mat' i Mekh, Vol. XXI, No 1, 1957,
pp 143-145.

*DSIR/TCL 101

Sci - Math
Oct 58

Table of Contents of :

Prik Matemat i Mekh, Vol XXI, No 2, 1957, pp 153-303.

FDD X 2624

On the Stability of the Rotating Movements of a
Solid Body the Cavity of which is Filled With an
Ideal Liquid, by N. G. Chetayev, 17 pp. UNCL

RUSSIAN, per, Prikl Matemat i Mekh, Vol XXI, No 2,
1957, pp 157-168. 9660800

ATIC MAIL-89/V

Sci - Phys

Apr 61

Telcom 140795

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The Theory of the Two-Gyroscope Vertical, by A. Yu. Ishlinskiy, 15 pp.

RUSSIAN, per, Prikl Matemat i Mekh, Vol XXI, No 2, 1957, pp 175-183.

ATTC F-78-9458/v

Sci - Phys
Feb 59

81,037

On the Lift and Induced Drag of a Wing-Body System,
by A. A. Nikol'skiy, 7 pp.

RUSSIAN, par, Prikl. Mate Mekh, Vol. XVI. No 2, 1957,
pp 189-194.

Morris D. Friedmann - N102
\$3.50

Sci - Engineering
Mar 59

84,389

Certain Variational Problems in the Gas Dynamics of
Axisymmetric Supersonic Flow, by Yu. D. Shmyglevskiy,
18 pp.

RUSSIAN, per, Prikl Matematika i Mekhanika USSR,
Vol XXI, No 2, 1957, pp 195-206.

SLA 59-10317

REF 134-10317

Sci - Electron

Sep 59

Vol 2, No 1.

97762

On Bodies of Minimum Drag in a Supersonic
Gas Flow, by M. N. Kogan, 12 pp.

RUSSIAN, per, Prik Mate i Mekh, Vol XXI,
No 2, 1957, pp 207-212.

OFS 60-17349

Sci

30 Mar 62

188,920

Wings of Minimum Drag, by Y. L. Zhilin,
14 pp.

RUSSIAN, per, Prikl Mat i Mekh, Vol XXI,
No 2, 1957, pp 213-220.

OTS 60-17350

Sci

30 Mar 62

188,922

Axisymmetric Movements of a Friable Medium, by
S. S. Griqoryan.
RUSSIAN, per, Prikladnaya Matematika i Mekhanika,
Vol 21, No 2, 1957, pp 221-230.
FTD-S-~~226~~ 296 - 65

Jan 69

373,551

On the Stability of a Panel Moving in a
Gas, by A. A. Novichon, 23 pp.

RUSSIAN, per, Pril Matemat i Mekhanika,
Vol XII, No 2, 1957, pp 231-243.

NASA PB 11-21-58W

Sci - Phys, Mathe

Mar 59

82,501

Asymptotic Solution of a Nonlinear Differential
Equation of Second Order.

RUSSIAN, per, Prikl Mat i Mekh, Vol XXI, 1957,
pp 262-271.

Language Sv Dn
LTS 6-17347

Sci - Math

Nov 60

131, 305

On Stability With Large Initial Perturbations, by
H. H. Krasovskiy, 14 pp.

RUSSIAN, per, Prikl Matemat i Mekh, Vol XXI, 1957,
pp 309-319.

Amer Math Soc

Sci - Math

Aug 63

341,562

Kreyn, M. G.
ON THE CHARACTERISTIC FUNCTION $\Lambda(\lambda)$ OF
THE LINEAR CANONICAL SYSTEM OF SECOND
ORDER DIFFERENTIAL EQUATIONS WITH PERI-
ODIC COEFFICIENTS. [1961] [19] p. 9 refs.
Order from LC or SLA in \$2.40, pb \$3.30 61-10621

Trans. of Inst. of Math. Mekh. i Mekh. (USSR)
1957, v. 21, no. 3, p. 320-329.

(Mathematics, TT, v. 5, no. 10)

61-10621

1. Functions - Theory
2. Differential equations - Theory
1. Kreyn, M. G.

101592

Office of Technical Services

Concerning One Case of the Movement of a
Kelvin Free Wave, by V. V. Musatov, 3 pp.

RUSSIAN, per, Prikl Matemat i Mekh, Vol XXI,
1957, pp 347-352.

NIOT/57

Sc1 - Engr

Mar 62

188,947

NLL M 5143

Calculation of Certain Sonic Flows of a Gas,
by P. I. Chushkin. UNCL

RUSSIAN, per, Prikl Mat i Mekh, Vol XXI, No 3,
1957, pp 353-360.

RAE 8:16

Sci - Phys
Sep 59

96,778

Chushkin, P. I.
CALCUL DES ÉCOULEMENTS SONIQUES D'UN GAZ
(Raschet Nekotorykh Zvukovykh Tehenii Gaza)
[Calculation of Some Gas Flows for Sonic Velocity] tr.
by Vinogradoff, B. 9 Sep 60 [20]p. (foreign text in-
cluded) 10 refs. CEA Trans. no. R 1007 (text in
French).

Order from OTS or SLA \$1.60

61-15786

Trans. in French of Prikl[adnaya] Mat[ematika i]
Mekh[anika] (USSR) 1957, v. 2, no. 3, p. 353-360.

DESCRIPTORS: Bodies of revolution, *Gas flow,
Numerical analysis, Differential equations, Velocity.

Consideration is given to the approach flow of ellipses,
ellipsoids of revolution (direction of the flow coincides
with the large axis) and arbitrary plane contours by a
flow which propagates with sonic velocity. With the aid
of a method of A. A. Dorodnitsyn for the calculation of
(Mechanics--Aerodynamics, TT, v. 6, no. 9) (over)

61-15786

- I. Chushkin, P. I.
- II. CEA-tr-R1007
- III. Commissariat à l'Énergie
Atomique (France)

Office of Technical Services

The Formation of a Boundary Layer on a Lamina With
a Moving Discontinuity in the Density, by Yu. A.
Dem'yankov, 11 pp.

RUSSIAN, per, Prikl Matemat i Mekh, Vol XXI, No 3,
May/June 1957, pp 368-374.

AMS Lib Tr

Sci - Geophysics
Sep 58

73,151

Elasto-Plastic Equilibrium of a Wedge in a Plane
Stress Condition, by L. M. Kachanov. UNCL

RUSSIAN, per, Prikl Mat Mekh, Vol XXI, No 3,
1957, pp 413-418.

DSIR 34177/CT

Sci - Math
Mar 59

83,398

Some Thermohydrodynamic Problems in Connection with
the Steady One-Dimensional Flow of a Viscous Trickle-
Liquid, by S. A. Rehrer, 1957. UNCLASSIFIED

RUSSIAN, per, Prikladnaya Matematika i Mekhanika, Vol
21, No 3, May-Jun 1957, pp 424-430.

ATIC F-TS-9489/III

Sci - Phys
Jul 58

66, #28

Heat Convection in a Revolving Round Pipe With a
Constant Temperature Gradient, by V. N. Golubenkov.

UNCLASSIFIED

RUSSIAN, per, Prik Matemat i Mekh, Vol III, May-Jun
1957, pp 439-440.

*ATIC F-TS-9489/III

Sci - Phys

Apr 58

Some Precise Solutions of the Equations of
Uniform Unsteady Motion of an Ideal Gas, by
N. N. Kochina.

RUSSIAN, per, Prikl Matemat i Mekhan, Vol XXI,
No 4, 1957, pp 449-458.

TIL T 4982

Sci - Phys

Jan 61.

137,379

On the Stability of a Plane Stationary Shock
Wave, by S. V. Iordanskii."
RUSSIAN, per, Prikladnaya Matematika i Mekhanika,
Vol 21, 1957, pp 465-472.
NTC 71-14360-01A

AEC. / LA / TR - 71-10

A min L-R Tr

73168

Feb 72

Influence of a Boundary Layer on the Flow Characteristics of a Gas Behind a Moving Shock Wave in a Pipe, by Yu. A. Dem'yanov, 7 pp.

RUSSIAN, per, Prikl. Matem. i Mekh, Vol XXI, No 4, Jul/Aug 1957, pp 473-477.

AMS Lib Tr

Sci - Physics
Sep 58

*ATIC
(check)

73.152

On the Motion of a Container Partially Filled With a
Liquid Taking Into Account Large Motions of the
Latter, by G. S. Narimanov.

RUSSIAN, per, Prik Mate i Mekh, Vol XXI, 1957,
pp 513-524.

*Redstone Arsenal

Sci - Phys

Aug 63

Vorobich, I. I. and Yelovitch, V. I.
EFFECT PRODUCED BY A ROUND DISC IN A
LIQUID OF FINITE DEPTH. [1951] 11p. 3 refs.
Order from NIS \$1.00 NIS S-2110

Trans. of the Academy of Sciences of the USSR (USSR)
1957, v. 21, no. 4, p. 525-532.

AEC-SEL-T-65-271

(On dynamics of hydrodynamic, TT, v. 5, no. 11)

61-21035

1. Lighthill--Physical
2. Lighthill--Physical

I. Vorobich, I. I.

II. Yelovitch, V. I.

III. NIS S-2110

IV. Research in Motion
Picture, New York

Office of Technical Services

Canonical Transformations of Equations of the
Automatic Control Theory with the Presence of
Multiple Radicals, by Va A. Troitskii, 5 pp.
RUSSIAN, per, Prik Matem i Mekh, Vol 21, 1957,
pp 574-577.
ARM/RSIC-Tr-574-577

Sci/Mech
Jul 70

A Contribution to the Construction of Periodic
Solutions of Autonomous Systems with One Degree of
Freedom, by A. F. Proskuryakov, 11 pp.

RUSSIAN, per, Prikladnaya i Mekhanika, Vol XXI, No 4,
1957, pp 585-590.

ATIC 17-TS-9453/III

Sci - Engr
Feb 59

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Boundary-Layer Equations and Their Boundary
Conditions in the Case of Motion at Supersonic
Velocities in a Moderately Rarefied Gas, by
Yu. N. Lunkin, 152.

RUSSIAN, per, Prikl Matemat i Mekh, Vol XXI,
1957, pp 597-605. 9692002

NLL M. 2392

FTD-191-62 1-7

Sci - Math

173, 882

Nov 61

The Stability (Based on Linear Approximation) of
the Periodic Solution of the System of Differential
Equations Having Discontinuous Right-Hand Sides,
by M. A. Aizerman, F. R. Gantmakher.

RUSSIAN, per, Prikl Matemat i Mekhan, Vol XXI,
1957, pp 658-669.

RAE 890

Sci - Phys

Jan 61

137,378

Krasovskii, N. N.
ONE OPTIMAL CONTROL PROBLEM. [1963] 12p.
9 refs.

Order from OTS or SLA \$1.60 63-14455

Trans. of Prikl[adnaya] Matem[atika] i Mekhan[ika].
(USSR) 1957, v. 21, no. 5, p. 670-677.
Another trans. is available from LC or SLA ml\$2.40,
pb\$3.30 as 60-18806 [1960] 13p.

DESCRIPTORS: *Control systems, Mathematical
analysis, *Difference equations, *Differential
equations.

For abstract see Technical Translations 5: 147, 1961.

(Mathematics, TT, v. 10, no. 8)

63-14455

I. Krasovskii, N. N.

Office of Technical Services

Drakhlin, E. Kh.
THE SOLUTION OF THE EQUATIONS FOR A CASE
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An examination is presented of the system of finite dif-
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$$x_i[(k+1)h] - x_i(kh) = [a_{1j}x_j(kh) + \dots + a_{1n}x_n(kh) + q_{11}u_1(kh) + \dots + q_{1r}u_r(kh) + f_1(kh)]h,$$

where $(i = 1, \dots, n)$, $(k = 0, 1, \dots)$, and $(h > 0 = \text{const})$;
 $x_1, \dots, x_n$ are the coordinates of a point in the phase
space of the system; $u_1, \dots, u_r$ are the control varia-
bles; $f_i(kh)$ are known functions; and a_{ij}, q_{ij} are con-
stants. The solution is described and the passage to
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equations when $h \rightarrow 0$ is substantiated.

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